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EXAMINER

CHARLES, MARCUS

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JOHN PITTS, BRUCE SWAYBILL,
PATRICIA A. DERWINSKI,
and
HUGH JAMES O'DONNELL

Appeal 2009-011036
Application 09/970,587
Technology Center 3600

Decided: August 27, 2009

Before MURRIEL E. CRAWFORD, JOSEPH A. FISCHETTI, and BIBHU
R. MOHANTY, *Administrative Patent Judges*.

CRAWFORD, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

This is an appeal from the final rejection of claims 15, 16, 19, and 21 to 27. These are the only claims in the application.

We have jurisdiction to review the case under 35 U.S.C. §§ 134 and 6 (2002).

The claimed invention is directed to an elevator belt assembly having a specialized groove arrangement (Spec. 1).

Claim 15, reproduced below, is further illustrative of the claimed subject matter.

15. A method of making an elevator belt having a plurality of cords within a jacket, comprising the steps of:

- (a) aligning the plurality of cords in a selected arrangement; and
- (b) applying the jacket to the cords while supporting the cords such that the applied jacket includes a plurality of longitudinally spaced grooves formed in the jacket where the grooves are disposed at least in part at an oblique angle to a longitudinal axis of the belt, and spaced at varying longitudinal intervals.

The references of record relied upon by the Examiner as evidence of obviousness are:

Westhoff	US 4,605,389	Aug. 12, 1986
Miranti	US 4,976,662	Dec. 11, 1990
Takao	JP 8-247221 A	Sep. 24, 1996

Claims 15, 16, 19 and 21 to 24, 26, and 27 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Takao in view of Miranti.

Claim 25 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Takao.

Claim 27 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Takao in view of Miranti and Westhoff.

OPINION

We have carefully reviewed the rejections on appeal in light of the arguments of the Appellants and the Examiner. As a result of this review, we have reached the conclusion that the applied prior art does not establish the prima facie obviousness of the claimed subject matter. Therefore the rejections on appeal are reversed. Our reasons follow.

The following comprise our finding of facts with respect to the scope and content of the prior art and the differences between the prior art and the claimed subject matter.

Takao discloses a belt 10 that is wrapped around a barrel shaped pulley 20 (page 4; Fig. 1)¹. The belt has multiple tensile core wires 3 extending in the length direction of the belt (page 3; Fig. 1). Takao discloses that care should be taken to ensure that the core wires 3 are all arranged at prescribed positions so that the arrangement will not become uneven (page 3). Grooves 4 are formed at equal intervals along the length direction of the belt as a reference for arranging the tensile core wires 3 (page 3). Takao teaches that the upper edges 4a of the grooves 4 will make contact with the pulley 20 during movement and create noise (page 4). In order to minimize the noise created by the interaction between the upper edges 4a of the

¹The page references throughout the opinion are the page numbers in the translation.

grooves 4 and the pulley 20, the grooves are formed as linear oblique grooves having a certain angle of inclination with respect to the axis of rotation or generating line of the pulley 20 (page 4).

Miranti discloses a ribbed power transmission belt 20A which has grooves 28 that mesh with projections 25 on the ribbed pulley 30 (col. 3, ll. 58 to 67). Miranti discloses that noise is created by the side edge of a groove on the belt engaging against the angled sheave surfaces of the projections of the pulley 30 (col. 4, ll. 14 to 17). Miranti teaches that the transverse grooves 28 of the belt 20A should have the longitudinal spacings therebetween and/or the depths of the transverse grooves 28 staggered to reduce the noise of the ribbed belt construction operating with the ribbed surface of the pulley (col. 4, ll. 26 to 33).

The disagreement between the Appellants and the Examiner is with respect to whether one of ordinary skill in the art would have combined the teachings of Takao and Miranti so as to arrive at the claimed invention. We agree with the Appellants that since the noise in the Miranti belt/pulley combination is created because the projections on the belt engage the grooves on the belt, one of ordinary skill in the art would not have a reason to combine the unequal spacing teaching in Miranti to the belt and pulley arrangement in Takao which does not include a pulley with projections. In addition, as Takao teaches that the spacing of the grooves is used as a reference for the arrangement of the cores and that care must be taken to ensure that the core wires are arranged at prescribed positions, a person of

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ordinary skill in the art would be led away from modifying the Takao arrangement so that the grooves are arranged so as to have unequal spacings therebetween. Therefore we are constrained to reverse all rejections on appeal.

CONCLUSION AND ORDER

The rejections of claims 15, 16, 19, and 21 to 27 are reversed.

REVERSED

hh

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